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Industrial Devel. &
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Africa Vol. 1
Box 31
Acc. 431-94-001 (206209)
NRC

Before the
United States
NUCLEAR REGULATORY COMMISSION
Washington, D.C. 20555

IN THE MATTER OF)	
)	
U.S. Nuclear, Inc.)	License No.
Export of Special Nuclear)	<u>XSNM-690, Amendment 2</u>
Material to the Republic)	
of South Africa)	

Intervenors Congressman Diggs et al. Interrogatories

The following interrogatories are submitted by the undersigned on behalf of Congresspersons Charles C. Diggs, Jr., Cardiss R. Collins, Shirley Chisholm, William L. Clay, John Conyers, Jr., Ronald V. Dellums, Walter E. Fauntroy, Augustus F. Hawkins, Ralph H. Metcalfe, Parren J. Mitchell, Robert Nix, Charles B. Rangel, Louis Stokes, The American Committee on Africa, the Episcopal Churchmen for South Africa, Elizabeth S. Landis, Esq., Theo-Ben Gurirab, The South West Africa Peoples Organization, The Washington Office on Africa and Thami Mhlambiso, the Petitioners in the above-referenced proceeding. This request is premised upon the Atomic Energy Act of 1954, as amended, (42 U.S.C. §2011, et seq.) and the regulations promulgated thereunder, specifically, 10 CFR §§2.740, 2.740b and 2.720(h)(2)(ii). as well as upon Executive Order 11,902, 3 CFR ___ (1976), 41 Fed. Reg. 4877 (February 3, 1976).

In addition to the foregoing grounds, these

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questions are submitted on behalf of the above-named Congresspersons in their official capacities as legislators who, as indicated at pp. 13 et seq. of the Diggs et al. Petition for Leave to Intervene, are severally responsible for developing and implementing appropriate legislation regarding United States atomic energy policy, including, inter alia, atomic energy cooperation with the Republic of South Africa and other countries.

It is requested that each interrogatory and subsidiary question thereto be answered separately, fully and in the order in which it appears:

- (1) What safeguards are in effect with regard to:
 - (a) U.S.-supplied special nuclear material used in the Safari-I research reactor?
 - (b) non-U.S. supplied special nuclear material used in this reactor?
- (2) What procedures, including contingency plans, if any, are in effect for the retrieval by the United States of special nuclear material from Safari-I, in the event that South Africa takes actions:
 - (a) which are inconsistent with the bilateral agreement for cooperation on atomic energy matters between the United States and the Republic of South Africa (sometimes hereinafter referred to as "the agreement")?
 - (b) which are inconsistent with license XSNM

690 and any of the amendments thereto?

- (c) which are inconsistent with the Atomic Energy Act of 1954, as amended, and in particular §§53(e)(5) and (6), 54, and 57(c) of the Act?
 - (d) which would place the U.S. in violation of its obligations under the Nuclear Non-Proliferation Treaty ("NPT")?
- (3) What are South Africa's existing nuclear facilities, other than Safari-I, including, inter alia, research reactors, power reactors and uranium enrichment and reprocessing facilities?
 - (4) What are South Africa's proposed nuclear facilities, including, inter alia, research reactors, power reactors and uranium enrichment and reprocessing facilities?
 - (5) What are the existing nuclear facilities, including, inter alia, research reactors, power reactors and uranium enrichment and reprocessing facilities located in Namibia?
 - (6) What are the proposed nuclear facilities, including, inter alia, research reactors, power reactors and uranium enrichment and reprocessing facilities to be located in Namibia?
 - (7) With respect to each facility named in response to questions (3) and (5) above:
 - (a) what are the safeguards procedures in

- effect at and applicable to each facility?
- (b) what is the relationship of those facilities to each other?
 - (c) what is the relationship of those facilities to Safari-I?
- (8) With respect to each facility named in response to questions (4) and (6) above:
- (a) what are the proposed safeguards procedures to be in effect at and applicable to each facility? —
 - (b) what is the projected relationship of those facilities to each other?
 - (c) what is the planned relationship of those facilities to Safari-I?
- (9) Please supply basic data on each facility named in response to questions (3), (4), (5) and (6) above, including, but not limited to:
- (a) date of first or projected operation
 - (b) town and province in which the facility is located
 - (c) operating capacity of the facility
 - (d) the extent to which, if any, U.S.-supplied materials are used or are planned for use in any of these facilities.
 - (e) whether those facilities or any of their parts were supplied by the United States?
- (10) What are the physical security measures for the handling of special nuclear material in effect at:
- (a) Safari-I?

- (b) at each other existing facility that has a relationship with Safari-I?
 - (c) at each projected facility that will have a relationship with Safari-I?
- (11) What are South Africa's plans for disposing of nuclear wastes produced as a result of special nuclear material utilized:
- (a) at Safari-I, including, but not limited to, U.S.-supplied materials?
 - (b) at any facility that has a relationship to Safari-I?
- (12) Does South Africa have reprocessing capability?
- (13) Has South Africa reprocessed special nuclear material?
- (14) What are South Africa's plans for and interest in reprocessing special nuclear materials?
- (15) What materials accounting safeguards does South Africa employ at Safari-I?
- (16) What is South Africa's nuclear weapons development capability?
- (17) What are South Africa's nuclear weapons plans?
- (18) Is South Africa's internal political situation relevant to the risks of diversion of special nuclear material? If so, in what specific way(s) is it relevant? If not, please explain.
- (19) Is South Africa's internal political situation relevant to the physical security of its nuclear

- facilities? If so, explain. If not, explain.
- (20) Has South Africa developed nuclear explosives?
- (21) Has South Africa ever used nuclear explosives?
- (22) If so, for what assertedly peaceful purposes, if any, have such explosives been used in and by South Africa?
- (23) What effect does the continued U.S. supply of special nuclear material to Safari-I have upon the United States' non-proliferation goal?
- (24) What, in the view of the Arms Control and Disarmament Agency, is the effect upon the United States' non-proliferation goal of continued U.S. supply of special nuclear material to Safari-I?
- (25) What is the attitude of the majority of the African States, and in particular the governments of Nigeria, Tanzania, Zambia, Botswana, Malawi, Mozambique and Angola, with respect to the supply by the United States of special nuclear material to Safari-I?
- (26) What is the effect upon the United States' non-proliferation goal of South Africa's failure to commit itself absolutely to refrain from the development of nuclear explosive devices for non-peaceful purposes?

- (27) What, in the view of the Arms Control and Disarmament Agency, is the effect upon the United States' non-proliferation goal of South Africa's failure to commit itself absolutely to refrain from the development of nuclear explosive devices for non-peaceful purposes?
- (28) What is the effect upon this country's non-proliferation policy of South Africa's failure to accept safeguards on all of its nuclear facilities?
- (29) What is the effect upon U.S. policy towards Africa of our continued nuclear cooperation with South Africa notwithstanding South Africa's failure to accept safeguards on all of its nuclear facilities?
- (30) With which other countries does South Africa cooperate in the field of nuclear energy?
- (31) What forms of nuclear cooperation exist between South Africa and Israel?
- (32) What forms of nuclear cooperation exist between South Africa and West Germany?
- (33) What forms of nuclear cooperation exist between South Africa and France?

- (34) What forms of nuclear cooperation exist between South Africa and Brazil?
- (35) What forms of nuclear cooperation exist between South African and American scientists?
- (36) With respect to the countries named in questions (31) through (34) above, which have ratified, acceded to, or deposited notifications of succession to the NPT?
- (37) Does the United States require as a condition for supplying special nuclear material to South Africa that reprocessing of spent fuel be prohibited?
- (38) Is there any reason why such a condition cannot be required with respect to pending export license application XSNM 690, Amendment 2, as well as all future export license applications concerning South Africa?
- (39) Is the United States Government prepared to seek an agreement with South Africa with respect to more stringent U.S. control over the disposition of plutonium and other special nuclear material produced at Safari-I than is provided for in the current bilateral agreement? If not, please explain.

- (40) What is South Africa's repair and maintenance capability with respect to Safari-I?
- (41) What is the operating history of Safari-I, including date of commencement, amount of uranium consumed, abnormal occurrences, and other relevant data? Please define and give examples of what would constitute abnormal occurrences, in the view of the United States Government.
- (42) What is the amount of U.S.-supplied enriched uranium shipped to Safari-I to date, by percentage of enrichment, amount of grams and date and place of each shipment?
- (43) Has your agency ever recommended denial of a past, existing or proposed export license until "full fuel cycle safeguards" have been adopted by South Africa? Please explain.
- (44) Has your agency, on any other basis, ever recommended denial of a past, existing or proposed export license with regard to South Africa? Please explain.
- (45) What understandings exist between the United States and the South African governments concerning process losses of U.S. supplied enriched uranium?

- (46) What is the negotiating history in regard to such losses?
- (47) Does the IAEA submit to the United States regular reports regarding
- (a) its inspections at Safari-I?
 - (b) its inspections at other South African facilities?

If so, how often are such reports submitted?

- (48) Or, does IAEA submit reports only when something irregular has occurred?
- (49) What, if any, irregular occurrences have been noted, indicated, reported, investigated or confirmed with respect to Safari-I? Please define and give an example or examples of an "irregular" occurrence that would be considered serious, in the view of the United States Government.
- (50) In the view of the United States Government:
- (a) What constitutes "weapons grade uranium?"
 - (b) What is the range of percentage of enrichment of such uranium?
- (51) What is the accepted measure of "weapons grade uranium" among nuclear scientists?
- (52) Has the United States entered into negotiations or concluded an agreement with other African nations with regard to cooperation on civil

- uses of atomic energy? If so, please specify.
- (53) Which African nations have expressed an interest in entering into such negotiations? Please give dates.
 - (54) Does the United States have a monopoly on the technology of heavy water? If so, please explain.
 - (55) Does the U.S. have a monopoly on the sale of heavy water? If so, please explain.
 - (56) Does the United States supply heavy water to Safari-I? If so, give the quantities and dates.
 - (57) Does the United States have any future commitments to supply heavy water to Safari-I?
 - (58) Which other countries supply heavy water for use in the Safari-I reactor?
 - (59) Has the United States shared with South African scientists the technology of heavy water production? If so, please specify.
 - (60) How much uranium has the United States imported from South Africa to date? Please give quantities per annum.
 - (61) What is the purpose(s) of importing such uranium?
 - (62) What percentage of the uranium imported into the United States from southern Africa since 1966 is of Namibian origin? Please give quantities for each relevant year.

- (63) What is the quantity of uranium of Namibian origin in existing U.S. uranium stockpiles?
- (64) What are the figures on projected U.S. importation of Namibian uranium?
- (65) What is the effect of the uranium mining operations at the Rossing site in Namibia upon U.S. importation of Namibian and South African uranium?
- (66) What is the original source(s) of the enriched uranium that the United States ships to South Africa?
- (67) Has the U.S. granted licenses for the importation of uranium ore of Namibian origin? If so, give the dates and quantities imported.
- (68) Has the U.S. granted any licenses for the importation of uranium ore from South Africa without ascertaining that none of that ore was of Namibian origin? Please supply details.
- (69) When uranium ore is imported into the United States from South Africa, what assurances does the United States require from South Africa that none of that ore was taken in Namibia?
- (70) Is South Africa developing uranium enrichment capability? Please give details.
- (71) What are the economic implications for the

United States of South Africa's uranium enrichment capability?

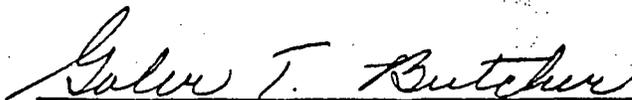
- (72) What are the implications of South Africa's enrichment capability for the non-proliferation of nuclear weapons policy of the United States?
- (73) Does the United States have any plans to renegotiate any of the (1) safeguards or (2) terms and conditions of supply provisions contained in the bilateral agreement with South Africa?
- (74) What, if any, verbal or written understandings, independent of the bilateral agreement, has the United States made with South Africa regarding U.S. commitments and intent to supply special nuclear material and power reactors to South Africa?

The Petitioners herein contend that each of the foregoing interrogatories is relevant to the subject matter involved in this proceeding, necessary to a proper decision in this proceeding, as well as reasonably calculated to lead to the discovery of admissible evidence. The undersigned request that answers to these interrogatories be served upon them within the time limits prescribed in 10 CFR §2.740b, subpara. (b) of the applicable regulations.

Respectfully submitted on
behalf of the Petitioners
herein,



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Dated: March 4, 1977

CERTIFICATE OF SERVICE

I hereby certify that on this 14th day of March, 1977 a copy of the "Intervenors Congressman Diggs et al. Interrogatories" was served by first class mail, postage pre-paid upon the parties indicated below:

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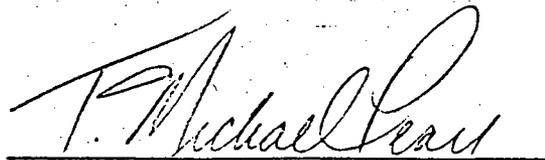
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